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## **ROTational AThErectomy in acute coronary syndrome: early and midterm outcomes from a multicentre registry**

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## CORONARY INTERVENTIONS

# ROTational AThErectomy in acute coronary syndrome: early and midterm outcomes from a multicentre registry

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**Aims:** The safety and efficacy of rotational atherectomy (RA) in patients presenting with non-ST-elevation myocardial infarction (NSTEMI-ACS) remain to be defined. The aim of our study was to assess the safety and efficacy of RA in NSTEMI-ACS patients with reference to both short- and long-term follow-up.

**Methods and results:** This was an observational retrospective registry which enrolled all consecutive patients undergoing RA, comparing patients with stable angina (SA) and NSTEMI-ACS. In addition, ACS patients were matched with those not undergoing RA. The primary endpoint was angiographic success. Procedural complications and in-hospital MACE were secondary endpoints along with MACE during follow-up. One thousand three hundred and eight patients were included: 37% (484) with an NSTEMI-ACS diagnosis and 63% (824) in the SA group. Angiographic success did not differ between the groups (98.8% vs. 99.2%,  $p=0.57$ ). By univariate analysis procedural complications were more frequent in the NSTEMI-ACS group (11.3% vs. 8.0%,  $p=0.04$ ). In-hospital MACE rates were comparable (5.7% vs. 5.8%,  $p=0.93$ ); by multivariate analysis NSTEMI-ACS patients showed a non-significant trend towards a higher risk of adverse events (HR 2.39, CI: 0.96-5.96,  $p=0.061$ ). MACE after a median of 27.9 months was significantly higher in the NSTEMI-ACS group compared with the SA group (32.4% vs. 24.2%, log-rank  $p<0.001$ ), results confirmed by multivariate analysis. After propensity score matching, NSTEMI-ACS patients undergoing RA had similar outcomes to ACS patients who did not undergo RA (16% vs. 13%, log-rank  $p=0.14$ ).

**Conclusions:** Rotational atherectomy has similar safety and angiographic outcome in patients with NSTEMI-ACS or SA. The higher rate of adverse cardiac events at follow-up in NSTEMI-ACS patients undergoing RA is comparable with a matched population of NSTEMI-ACS patients not undergoing RA.

## KEYWORDS

- acute coronary syndrome
- rotational atherectomy
- rotablator
- calcified lesion
- NSTEMI-ACS

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